

Amendments to the Claims

This listing of the claims will replace all prior versions, and listing of claims in the application. All amendments are made without prejudice.

1. (Previously submitted) A method for collapsing microbubbles, the microbubbles having a diameter of 50 μm or less and floating in a solution and decreasing gradually in size by natural dissolution of the gas contained in the microbubbles, the method comprising accelerating a speed of microbubble size decrease and disappearance by applying a stimulation to the microbubbles, wherein a great amount of free radical species are released from a gas-liquid interface by increasing a charge density at the gas-liquid interface of the microbubbles.
2. (Currently amended) The method according to Claim 1, wherein the microbubbles form an ultrahigh-pressure ultrahigh-temperature region inside in an adiabatic compression-like change of the microbubbles caused by decrease of the microbubbles size by the stimulation.
3. (Cancelled)
4. (Currently amended) The method according to Claim 1, wherein free radical species comprising active oxygen species for decomposition of substances present inside the microbubbles or in an area surrounding the micro bubbles are generated by collapsing the microbubbles by the stimulation.
5. (Previously submitted) The method according to Claim 1, wherein the method gives rise to a compositional change of chemical substances dissolved or floated in the solution.
6. (Previously submitted) The method according to Claim 1, wherein the method sterilizes microbes, viruses, and other microorganisms present in the solution.
7. (Cancelled)
8. (Cancelled)

9. (Cancelled)

10. (Currently amended) The method according to Claim 1, wherein the stimulation is compression, expansion and swirling current generated by circulating part of a microbubble-containing solution in a container ~~connecting~~ connected by a circulation pipe by ~~to~~ a circulation pump and making the solution path through an orifice plate or porous plate having a single hole or multiple holes, wherein the orifice plate or porous plate is installed in the circulation pipe.

11. (Previously submitted) The method according to Claim 10, wherein the circulation pump gives a positive pressure of 0.1 MPa or more to a discharge side.

12. (Previously submitted) The method according to Claim 10, wherein the circulation pump gives a negative pressure lower than an environmental pressure to an intake side.

13. (Currently amended) The method according to Claim 1, wherein the stimulation is compression, expansion and swirling current generated by feeding a microbubble-containing solution in a container ~~connecting~~ connected to a circulation ~~pump by a pipe into the~~ circulation pipe and making the solution path through an orifice plate or porous plate having a single hole or multiple holes, wherein the orifice plate or porous plate is installed in the circulation pipe.

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)